

ARIZONA  
CHRONIC DISEASE REPORT  
December 2005

Arizona Department of Health Services  
Public Health Prevention Services

# Arizona Chronic Disease Report: December 2005

by

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# Chronic Disease Report

## State of Arizona

Chronic disease accounts for seven of the 10 leading causes of deaths for the state of Arizona (Arizona Health Status & Vital Statistics, 2004). They are the most prevalent, costly, and preventable of all health problems. Increased opportunity for primary and secondary prevention of chronic disease has resulted in the expansion of chronic disease programs within the Public Health Services of the Arizona Department of Health Services (ADHS). Effective public health programs include the monitoring of disease risk factors through public health surveillance. Public health surveillance is the ongoing systematic collection, analysis, and interpretation of outcome-specific data for use in planning, implementing, and evaluating public health practice (Friis & Sellers, 1996).

Health indicators were chosen to address the need for a chronic disease surveillance system. The indicators were chosen if the disease, condition, or risk factor imposed a considerable public health burden and if the surveillance data were available for its inclusion into the surveillance system. The data systems for chronic disease surveillance include mortality, hospital discharge, Behavioral Risk Factor Surveillance System (BRFSS), Youth Risk Behavior Surveillance System (YRBSS), United States Renal Data System (USRDS), and United States Census data.

This report condenses information about the leading chronic diseases in Arizona into a single document. It is intended to serve the needs of several chronic disease programs by summarizing and comparing outcome data. However, its greatest value is in presenting the statewide trend data of the behavioral risk factors for these diseases. Data trends are presented throughout this report.

The following table provides an overview of chronic disease in Arizona for 2004.

Disease	Mortality <sup>1</sup>		Hospitalization <sup>2</sup>		Estimated Prevalence <sup>3</sup>		Calculated Prevalence <sup>4</sup>
	Number	Rate <sup>†</sup>	Number	Rate <sup>†</sup>	Number	Rate	Percent
Asthma	56	NA	6,508	111.5	660,534	11.3%	7.1%
Arthritis	NA	NA	21,123	362.2	NA	NA	26.5
Cancer	9,506	164.7	20,073	344.1	301,482	5.2%	NA
Cardiovascular Disease	13,828	248.5	98,916	1,696.0	284,604	4.9%	NA
Chronic Lower Respiratory Disease	2,392	41.9	13,380	229.4	727,221	12.5%	NA
Diabetes	1,180	20.7	8,386	143.8	279,964	4.8%	6.6%

† Rates are per 100,000 population.

NA = Not Available

1. Data Source: Arizona Health Status & Vital Statistics, 2004, where the disease is listed as the underlying cause of death.

2. Data Source: Number/Rate of Discharges by Principal Diagnosis and Age Group, Arizona Residents, 2004 available at <http://www.azdhs.gov/plan/hip/by/diagnosis/index.htm>

3. The prevalence estimates were calculated by applying the national estimate (NHIS 2001) to the 2004 population estimate for the State. Asthma and diabetes are the only conditions that include children (age<18).

4. The prevalence estimates represent percentages based on the Behavioral Risk Factor Surveillance System data specific to 18 years and older Arizona residents for 2004 available at [www.cdc.gov/brfss](http://www.cdc.gov/brfss).

## Section I: CHRONIC DISEASE AND CONDITIONS

The chronic diseases presented in this section are the leading causes of death and disability in Arizona as well as in the United States. These diseases account for seven of every 10 deaths and affect the quality of life of 90 million Americans.

### 1. Asthma

(ICD9 = 493 - 493.99) and (ICD10= J45 - J46)

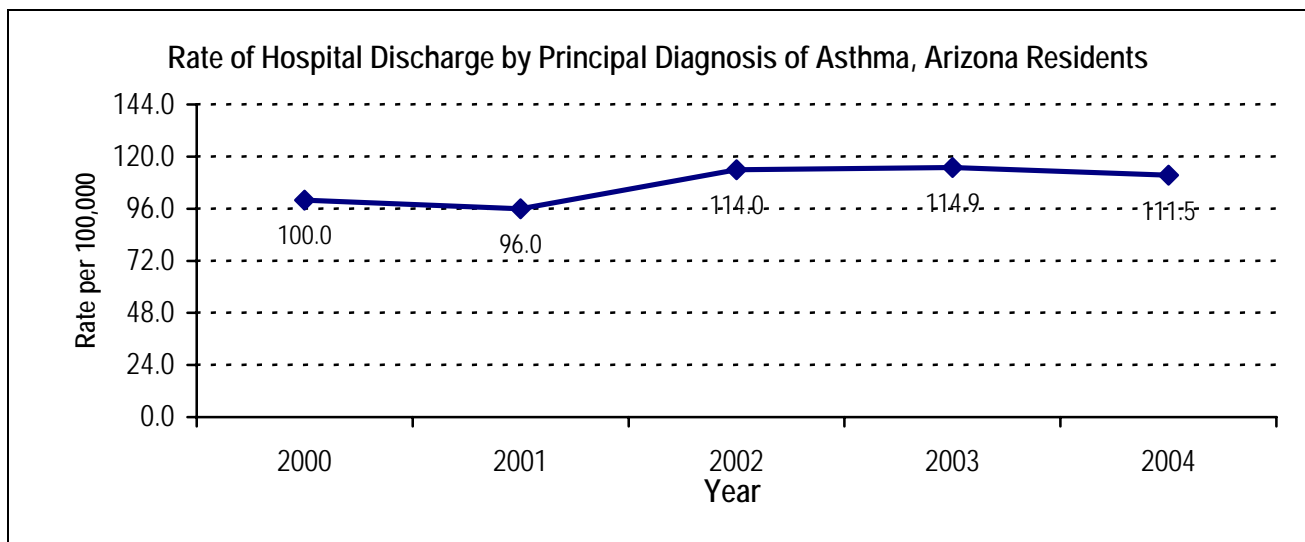
Asthma is one of the nation's most common and costly diseases, affecting 17 million Americans, including almost 5 million children. It is a chronic respiratory disease by which the small airways in the lungs become inflamed and narrowed in response to triggers. It causes repeated episodes of wheezing, breathlessness, chest tightness, and nighttime or early morning coughing. Asthma can be controlled by following a medical management plan and by avoiding contact with environmental "triggers," such as cockroaches, dust mites, furry pets, mold, tobacco smoke, and certain chemicals<sup>a</sup>.

#### *Prevalence*

Although it is difficult to diagnose asthma among the less than 5 years old, the National Health Interview Survey estimated 7.1 percent of children less than 5 years old as current asthmatics, 9.4 percent among the 5 to 17 years old. During 2004, BRFSS determined a prevalence of 7.1 percent among Arizona adults (persons 18 years of age or older)<sup>b</sup>.

#### *Emergency Room and Hospitalizations*

Arizona Hospitalization Discharge Data (2004) show 35,393 asthma related hospitalizations for Arizona residents only. The average length of stay was approximately 4 days with a total of 142,905 days for all asthma related hospitalizations. An average of \$21,350 charges per hospitalization with total health care charges of \$755 million for all hospitalizations.



Source: Hospital Discharge Database, ADHS, 2000-2004.

Additionally, a greater number of females were hospitalized for asthma related complications (66% females vs. 34% males). The majority of hospitalizations were among Non-Hispanic White/Caucasian Arizonans followed by Hispanics/Latinos, and African Americans (71%, 15%, and 6% respectively).

For persons under 21 years of age, hospitalization discharge data show 2,926 hospitalizations due to asthma as a primary complication. Approximately 52.5 percent of this group was less than 1 year to 4 years old, 40.2 percent were between five years and 14 years of age, and 7.3 percent were between 15 years and less than 21 years of age. The average length of stay for this group was approximately 2.3 days with a total of 6,808 days for all hospitalizations. An average of \$7,541 was charged per hospitalization with total health care charges of \$22 million.

During 2004, there were 20,532 outpatient visits to the Emergency Department with primary cause of asthma. The total cost for the asthma emergency visits was \$20,009,382 with an average of \$974.55 per visit. Over 44percent of the visits were among children less than 15 years of age, 14.7 percent among 15 to 24 years old, 24.3 percent among 25 to 44 years old, 12 percent among 45 to 64 years old, and five percent among persons 65 and older.

#### *Mortality*

During 2004, there were 56 deaths due to asthma as primary cause of death in Arizona<sup>b</sup>.

#### *Reference*

- a. Center for Disease Control and Prevention, Asthma and Allergies,  
[www.cdc.gov/health/asthma.htm](http://www.cdc.gov/health/asthma.htm)
- b. Arizona Department of Health Services, Behavioral Risk Factor Survey  
[www.azdhs.gov/plan/brfs](http://www.azdhs.gov/plan/brfs)

For more information about asthma in Arizona refer to the Arizona Asthma Coalition,  
[www.azasthma.org](http://www.azasthma.org)

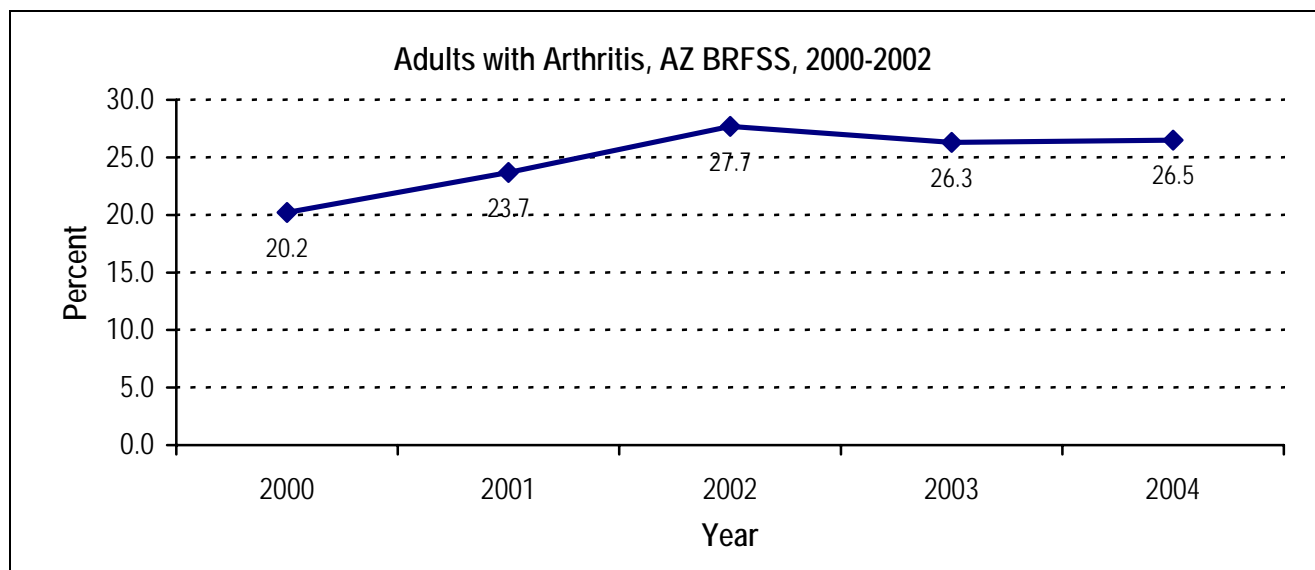
## 2. Arthritis

(ICD9 = 274,354,390,391,443,446,710-716,719-721, and 725-729)

Nationally, seven million people are limited in their daily activities because of arthritis, while another 36 million endure aches and pains associated with arthritis and other rheumatic conditions. In Arizona, arthritis affects approximately 900,000 or more individuals -- more than one out of every six people. Prevalence of arthritis in Arizona is expected to dramatically increase in the coming years, due to the aging of the baby-boom generation and the popularity of Arizona as a retirement destination. Arthritis encompasses more than 100 diseases and conditions affecting joints, the surrounding tissues, and other connective tissues. These conditions include bursitis, fibromyalgia, gout, lyme disease, lupus (systemic lupus erythematosus), osteoarthritis, rheumatoid arthritis, and rheumatic fever. The three most common forms of arthritis are fibromyalgia, osteoarthritis, and rheumatoid arthritis<sup>a</sup>. Arthritis and Other Rheumatic Conditions include ICD-9-CM codes selected by the National Arthritis Data Workgroup. The codes are as follows: 274, 354, 390, 391, 443, 446, 710-716, 719-721, and 725-729.

### *Prevalence*

In 2004, 26.5 percent of Arizona adults reported having arthritis<sup>b</sup>. The majority of Arizona adults that reported having arthritis were women (60% women vs. 40% men). Since the year 2000, the percentage of adults, who reported having arthritis, has steadily risen.

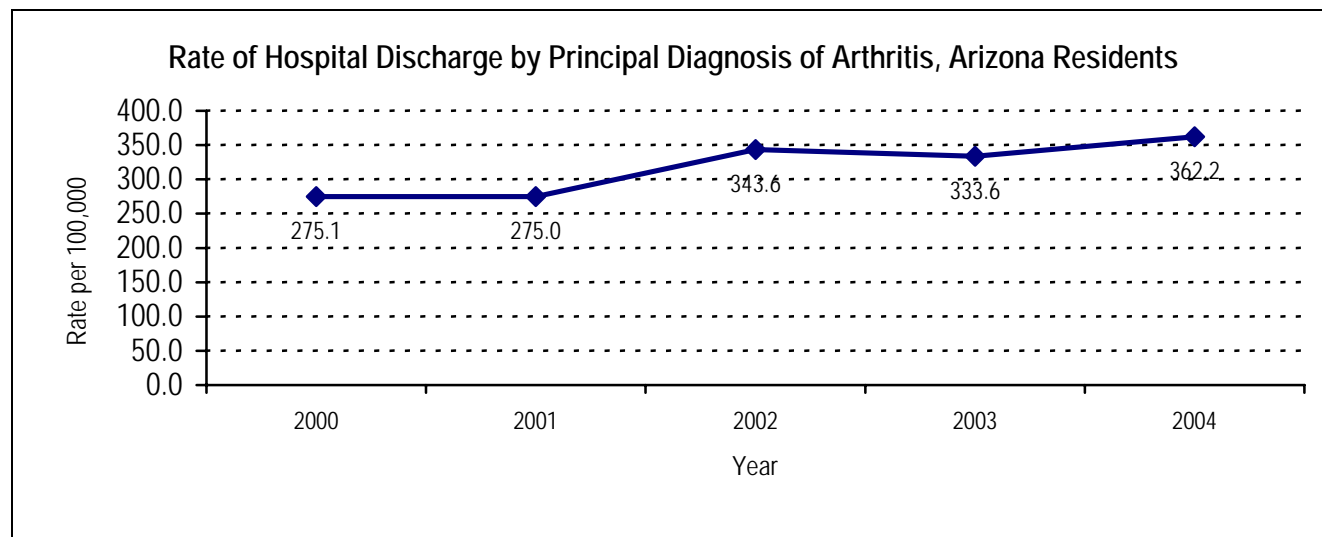


Source: Arizona BRFSS, 2000-2004.

### *Emergency Room and Hospitalizations*

Hospital discharge data for 2004 reveals 21,123 hospitalizations due to arthritis and other rheumatic conditions<sup>c</sup>. The rate of arthritis-related hospitalizations increased from 275.1 per 100,000 population in 2000 to 362.2 per 100,000 population in 2004.

In 2004, there were 47,517 outpatient visits to the Emergency Department with a primary cause of arthritis. The total cost for arthritis related emergency visits was \$44,596,810 with an average of \$938.56 per visit.



Source: Hospital Discharge Database, ADHS, 2000-2004.

#### Reference

- Arthritis Foundation, [www.arthritis.org](http://www.arthritis.org)
- Arizona Department of Health Services, Behavioral Risk Factor Survey [www.azdhs.gov/plan/brfs](http://www.azdhs.gov/plan/brfs)
- Centers for Disease Control and Prevention, Direct and Indirect Costs of Arthritis and Other Rheumatic Conditions-United States, 1997. MMWR 2003;52:1124-4.

### 3. Cancer

(ICD9= 140 - 208) or (ICD9= 230 - 239) and (ICD10= C00-D48)

Cancer is the second leading cause of death in Arizona, second only to heart disease. American Cancer Society estimated 1,368,030 people in the United States as newly diagnosed with cancer during 2004. In Arizona alone, it is estimated that 23,560 individuals were newly diagnosed with cancer in 2004. Cancer is a large group of diseases characterized by uncontrolled growth and spread of abnormal cells. Cancer can be caused by external factors (chemicals, tobacco smoke, radiation, viruses), internal factors (hormones, immune conditions, genetics), and lifestyle factors (tobacco and alcohol use, unprotected sun exposure, poor nutrition, physical inactivity). Many cancers can be cured if detected and treated promptly, and many others can be prevented by lifestyle changes, especially avoidance of tobacco<sup>a</sup>.

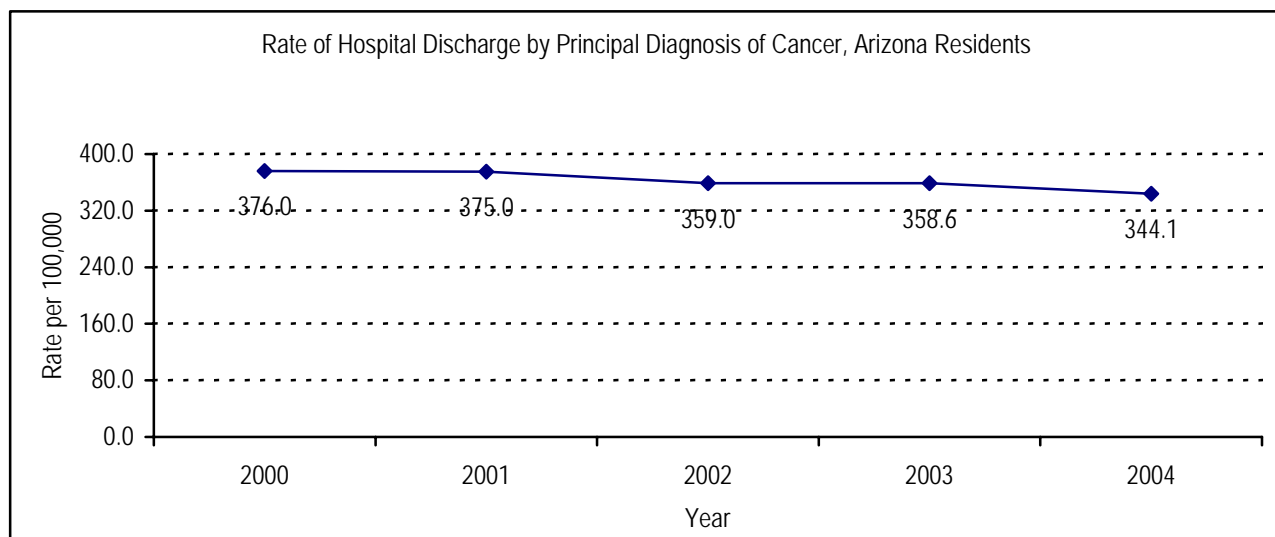
Arizona Revised Statute §36-133 mandates the reporting of cancer cases in the state of Arizona. The Arizona Cancer Registry is a population-based surveillance system that collects, manages and analyzes information on the incidence, survival and mortality of persons diagnosed with cancer.

### *Incidence*

Based on the Arizona Cancer Registry, from 1999 to 2001 there were an average of 23,158 cases of cancer diagnosed and reported per year in Arizona with an average annual age-adjusted rate of 419.2 per 100,000 population<sup>b</sup>. The most common types of cancer diagnosed were prostate cancer in males and breast cancer in females. Lung cancer and colorectal cancer were the second and third most commonly diagnosed cancer in both sexes. These four cancers accounted for 56 percent of all cancers.

### *Emergency Room and Hospitalizations*

Arizona Hospital Discharge Data (2004) show 20,073 discharges with cancer as primary diagnosis among Arizona residents. The average length of stay was approximately 6.3 days with a total of 125,811 days for the discharges with cancer as primary diagnosis. An average of \$37,840 charges per hospitalization with total health care charges of \$759 million for all discharges with cancer as primary diagnosis. In addition to the hospital discharges, during 2004, there were 1,196 visits to the Emergency Department with primary cause of cancer. The total charges for cancer emergency visits were \$2,276,856 with an average of \$1,904 per visit. The majority of emergency visits were among those of 45 years and older (80.7%).

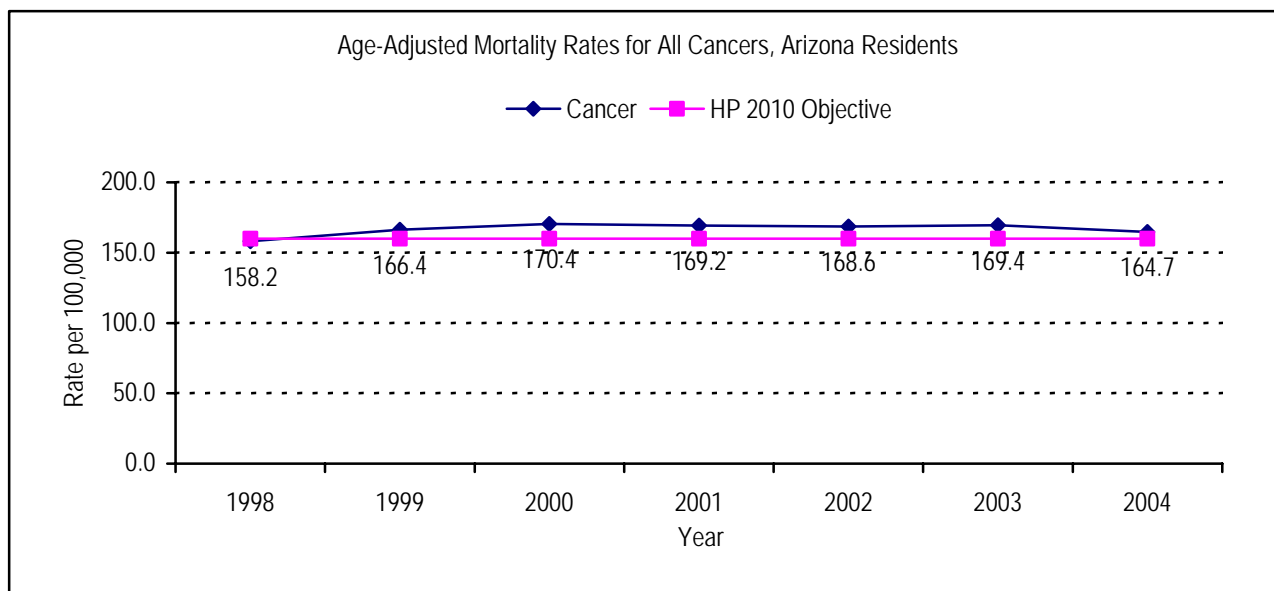


Source: Hospital Discharge Database, ADHS, 2000-2004.

### *Mortality*

In Arizona, cancer ranked as the 2<sup>nd</sup> leading cause of death for both males and females. During 2004, there were 9,506 deaths from all cancers. Of those 53.7 percent were males and 46.3 were females.





Source: Arizona Health Status & Vital Statistics, 2000-2004.

#### Reference

- American Cancer Society, Arizona 2004, [www.cancer.org](http://www.cancer.org)
- Arizona Department of Health Services, [www.azdhs.gov/phs/phstats/acr/index.htm](http://www.azdhs.gov/phs/phstats/acr/index.htm)

## 4. Cardiovascular Disease

(ICD9 = 390 - 434 or ICD9 = 436 - 448) and (ICD10 = I00 - I78)

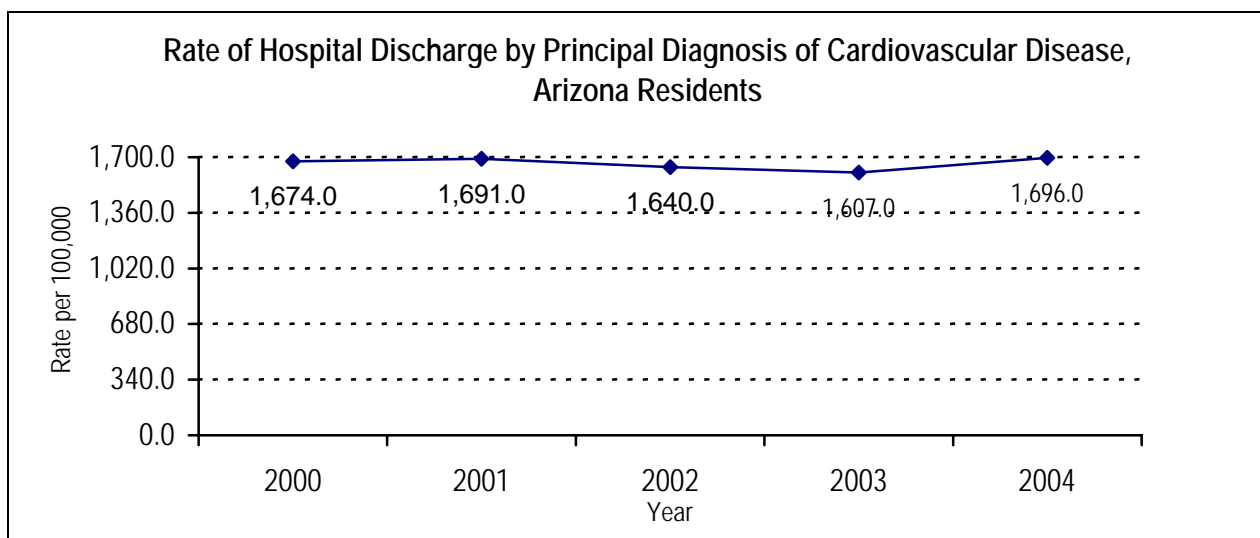
Cardiovascular disease is the leading cause of death for both men and women in the U.S. and Arizona. Two of the major independent risk factors for cardiovascular disease are high blood pressure and high blood cholesterol. Other important risk factors are diabetes, tobacco use, physical inactivity, poor nutrition, and overweight and obesity<sup>a</sup>.

#### Prevalence

The principal components of cardiovascular disease are heart disease and stroke, the first and third leading causes of death in the U.S. In Arizona, heart disease and stroke were the first and fourth leading cause of death in 2004; 10,402 deaths were due to heart disease and 2,412 were due to stroke<sup>b</sup>.

#### Emergency Room and Hospitalizations

Arizona hospital discharge data (2004) show 98,916 cardiovascular related hospitalizations among Arizona residents. The average length of stay was approximately 4.3 days with a total of 374,963 days for cardiovascular disease listed as the primary diagnosis. Additionally, the average cost of cardiovascular disease related hospitalizations in 2004 was \$38,775 with total health care charges of \$3.4 billion.

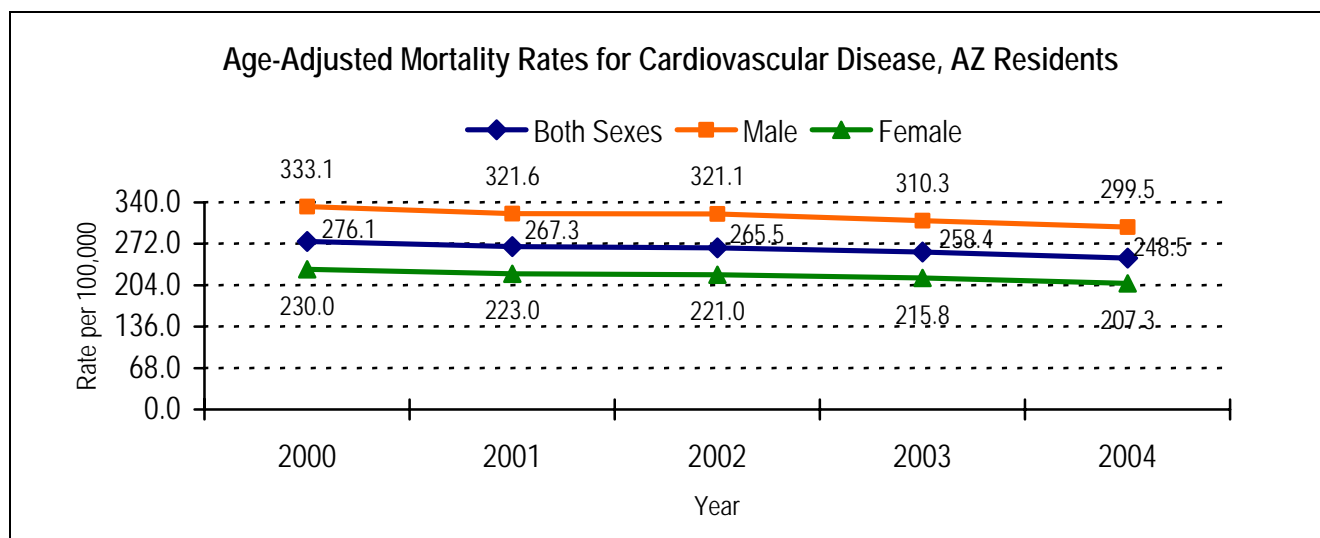


Source: Hospital Discharge Database, ADHS, 2000-2004.

In 2004, there were 47,517 outpatient visits to the Emergency Department with a primary cause of cardiovascular disease. The total cost for cardiovascular disease related emergency visits was \$66,504,162 with an average of \$2,599.65 per visit.

### Mortality

In Arizona, cardiovascular disease is the first leading cause of death for both males and females. During 2004, there were 13,828 deaths due to cardiovascular disease. Of those 50.7 percent were males and 49.2 were females.



Source: Arizona Health Status & Vital Statistics, 2000-2004.

### Reference

- Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Chronic Disease Prevention, [www.cdc.gov/nccdphp/bb\\_heartdisease/index.htm](http://www.cdc.gov/nccdphp/bb_heartdisease/index.htm)
- Arizona Department of Health Services, Arizona Health Status & Vital Statistics, 2004, [www.azdhs.gov/plan/report/ahs/index.htm](http://www.azdhs.gov/plan/report/ahs/index.htm)

## 5. Chronic Lower Respiratory Disease

(ICD9 =490 - 493 or ICD9= 496 - 497) and (ICD10= J40 - J47)

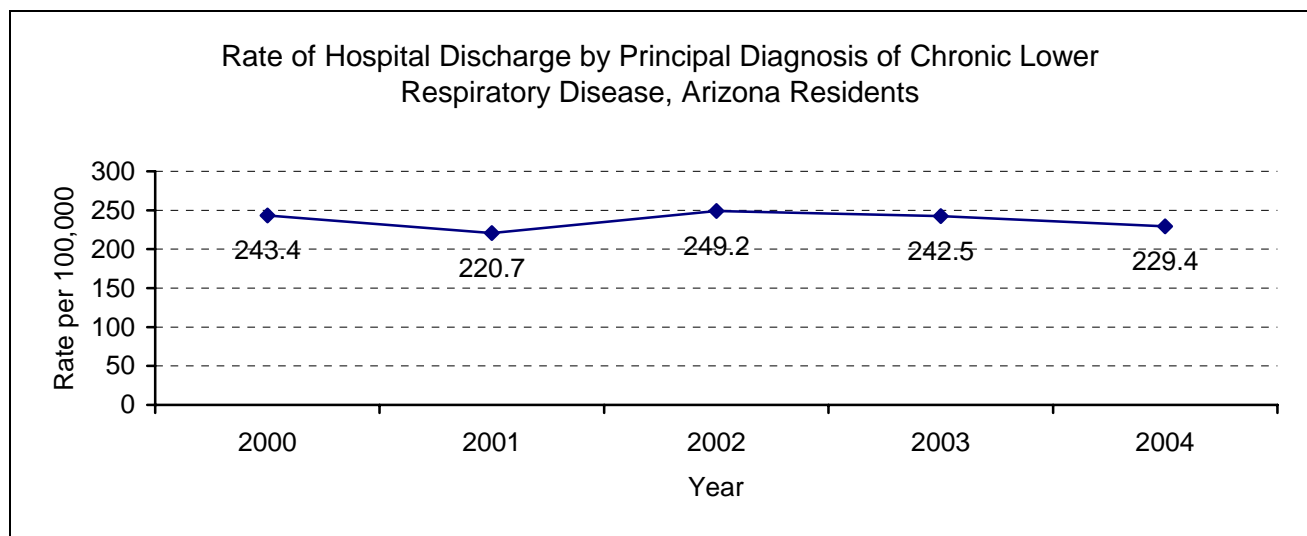
Chronic Lower Respiratory Disease is comprised of many conditions such as chronic bronchitis and emphysema. In chronic bronchitis, the airways leading to the lungs become inflamed and thickened causing an increase in mucus production, which also contributes to cough and difficulty in breathing. In emphysema, the small air sacs in the lungs are destroyed leaving only a few large air sacs, which have less surface area for the exchange of oxygen and carbon dioxide. Poor exchange of oxygen and carbon dioxide causes shortness of breath<sup>a</sup>.

### *Prevalence*

The 2004 prevalence for chronic lower respiratory diseases for Arizona was estimated based on the 2001 National Health Interview Survey. Based on the national rates, during 2004 there were an estimated 727,221 Arizonans diagnosed with chronic lower respiratory diseases.

### *Emergency Room and Hospitalizations*

Arizona Hospital Discharge Data for 2004 show 13,380 hospitalizations due to chronic lower respiratory disease. The average length of stay was approximately 4 days with a total of 50,819 days for all discharges with primary diagnosis of chronic lower respiratory disease. The average charge per discharge was \$15,312 with total health care charges of \$204 million for all hospitalizations with primary diagnosis of chronic lower respiratory disease. Of the 13,380 discharges, 56.6 percent were among females and 43.4 percent among males. The majority of the hospitalizations were among Non-Hispanic White/Caucasian Arizonans followed by Hispanic/Latinos, and African Americans (73.3%, 14.2%, and 5.2% respectively).



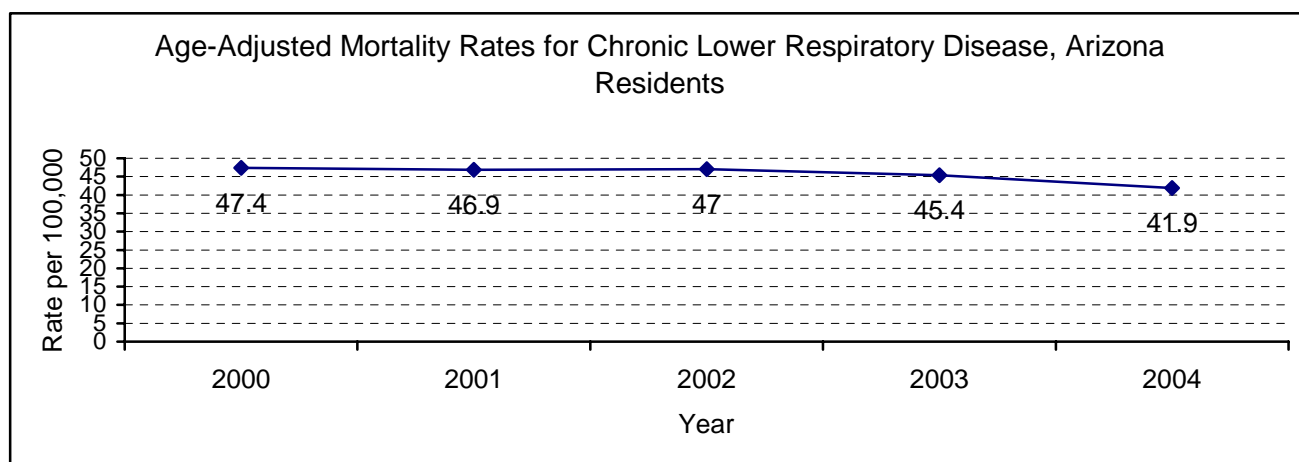
Source: Hospital Discharge Database, ADHS, 2000-2004

During 2004, there were 36,785 visits to the Emergency Department with primary diagnosis of chronic lower respiratory diseases. The total charges for chronic lower respiratory disease visits were \$39,920,994 with an average charge of \$1,085 per visit. Thirty-two percent of the visits were among children less than 15 years of age, 12.7 percent among 15-24 years old,

24.4 percent among 25 to 44 years old, 17.5 percent among 45 to 64 years old, and 13.7 percent among persons 65 years and older.

### *Mortality*

In 2004, chronic lower respiratory diseases (bronchitis, emphysema, asthma) were the 5<sup>th</sup> leading cause of death among Arizona residents. Rural males, the group at the highest mortality risk for chronic lower respiratory diseases, were 36.7 percent more likely in 2004 to die from this cause than rural females<sup>b</sup>.



Source: Arizona Health Status and Vital Statistics, 2000-2004

### *Reference*

- National Institute of Health,  
[www.nhlbi.nih.gov/health/dci/Diseases/Copd/Copd\\_OtherNames.html](http://www.nhlbi.nih.gov/health/dci/Diseases/Copd/Copd_OtherNames.html)
- Arizona Department of Health Services, Arizona Health Status & Vital Statistics, 2004,  
[www.azdhs.gov/plan/report/ahs/index.htm](http://www.azdhs.gov/plan/report/ahs/index.htm)

For information on chronic lower respiratory diseases, [www.cdc.gov/nceh/airpollution/copd/default.htm](http://www.cdc.gov/nceh/airpollution/copd/default.htm)

## **6. Diabetes**

(ICD9 =250) and (ICD10=E10 - E14)

Diabetes is a disease in which the body does not properly use or produce insulin. Insulin is a hormone that converts sugar and other food into energy. Two major types of diabetes are Type 1 and Type 2 diabetes. In Type 1 diabetes, the body does not produce enough insulin. In Type 2 diabetes, the most common form of diabetes, either the body does not produce enough insulin or the cells ignore the insulin<sup>a</sup>.

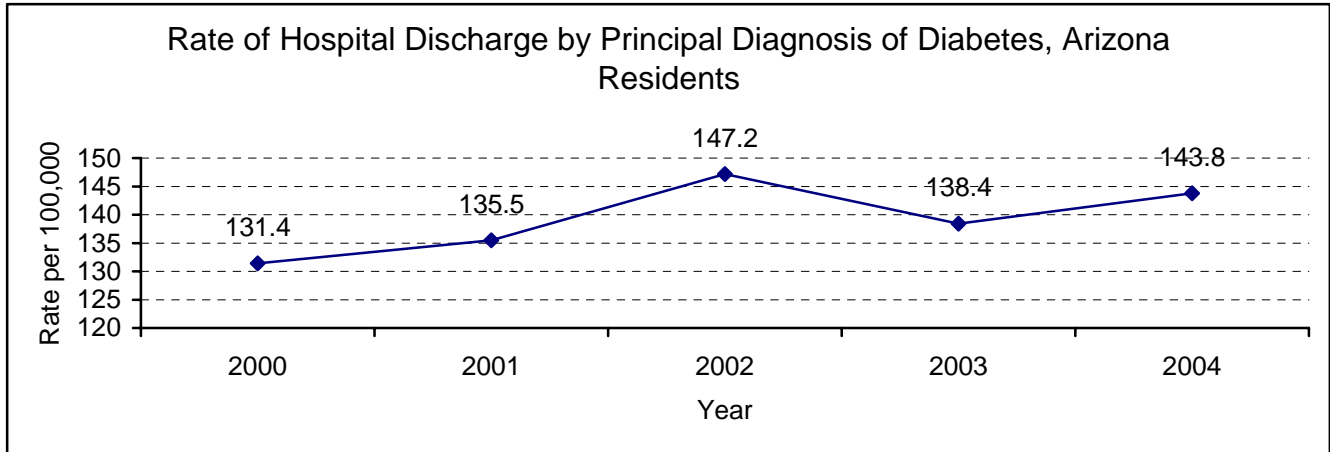
### *Prevalence*

During 2004 there were 279,964 Arizonans estimated with diabetes<sup>b</sup>. The prevalence among various ethnic groups ranges from six percent to 50 percent or more. Diabetes continues to be a serious health problem in Arizona and the United States.

### *Emergency Room and Hospitalizations*

Arizona Hospitalization Discharge Data (2004) show 91,723 diabetes related hospitalizations for Arizona residents only. The average length of stay was approximately 4.7 days with a total of 429,496 days for all diabetes related hospitalizations. An average of \$26,867 was spent per hospitalization with a total health care expenditure of \$2.4 billion for all hospitalizations.

The majority of hospitalizations were among Non-Hispanic White/Caucasian Arizonans followed by Hispanics/Latinos, and Native American (64%, 20.3%, and 5.7% respectively).

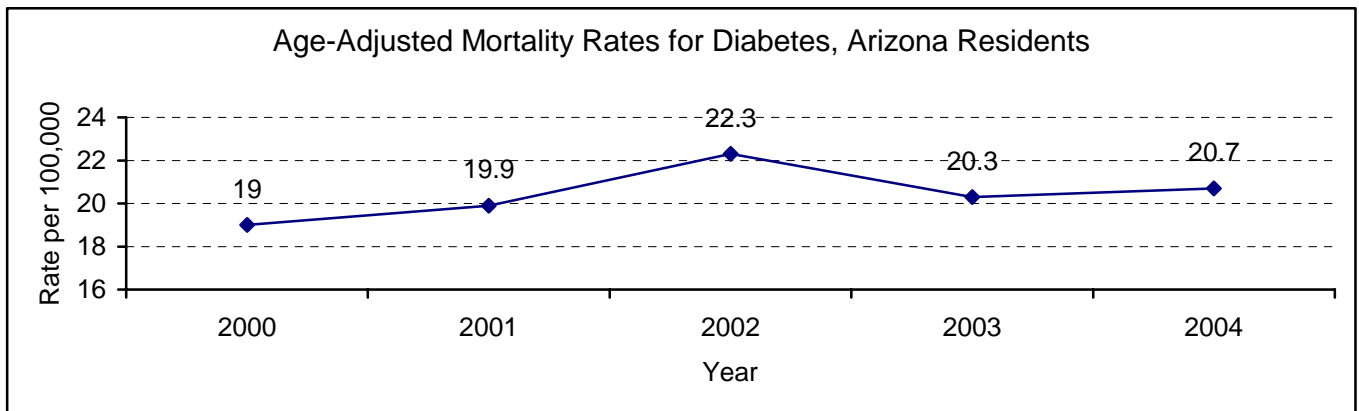


Source: Hospital Discharge Database, ADHS, 2000-2004

During 2004, there were 7,486 outpatient visits to the Emergency Department with primary cause of diabetes. The total cost for the diabetes emergency visits was \$10 million with an average of \$1,364 per visit. Over two percent of the visits were among children less than 15 years of age, seven percent among 15 to 24 years old, 28.3 percent among 25 to 44 years old, 32.3 percent among 45 to 64 years old and 30.5 percent among persons 65 and older.

### *Mortality*

During 2004, there were 1,180 deaths due to diabetes as primary cause of death in Arizona.



Source: Arizona Health Status & Vital Statistics, 2000-2004.

### *Reference*

- a. American Diabetes Association, [www.diabetes.org](http://www.diabetes.org)
- b. Arizona Department of Health Services, Chronic Disease Estimates, 2004

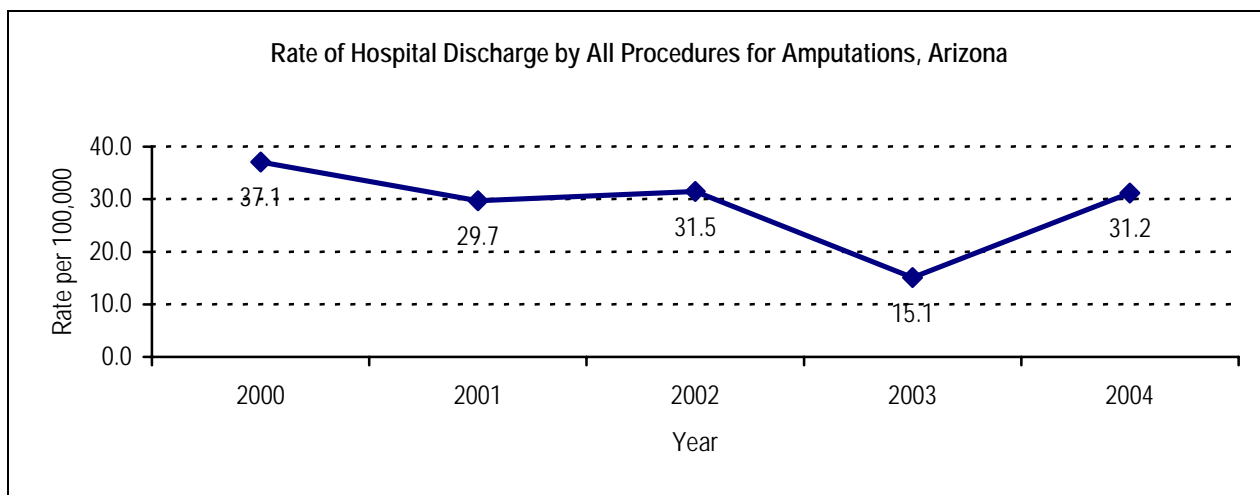
## Section II: Complications of Chronic Diseases

Early detection and treatment of chronic diseases can help reduce its complications. The following section describes important complications related to chronic diseases listed in the above section.

### 7. Amputations:

Diabetes is the most frequent cause of lower limb amputations. The risk of a leg amputation is ten times greater for a person with diabetes<sup>a</sup>.

Hospital Discharge Data was used to calculate the rate of discharge for lower extremity amputations. In 2004, there were 1,820 discharges with lower extremity amputations. Of those, 70.5 percent were diabetes related.



Source: Hospital Discharge Database, ADHS, 2000-2004.

#### Reference

- a. Complications of Diabetes in the United States. *American Diabetes Association, 2005.*  
Available at <http://www.diabetes.org/diabetes-statistics/complications.jsp>

For more information on Lower Extremity Amputations related to diabetes, visit <http://www.diabetes.org/>

### 8. Blindness

Based on the *2002 Vision Problems in the USA Report* from the National Eye Institute, it is estimated that 2.75 percent of the 40 years of age and older population in Arizona has a vision impairment or is blind. Blindness is defined as visual acuity with best correction in the better eye worse than or equal to 20/200 or a visual field extent of less than 20 degrees in diameter. Vision impairment is defined as having 20/40 or worse vision in the better eye, even with eyeglasses<sup>a</sup>.

National Eye Institute Report, Arizona 2002			
	Total	Female	Male
Population, aged 40 and older	2,114,232	1,110,773	1,003,459
Vision Impairment	58,117	36,002	22,115
Blindness	16,530	10,570	5,960
Cataract	378,937	225,001	153,936
Glaucoma	36,573	22,416	14,157
Population, 18 and older	3,763,685	1,903,939	1,859,746
Diabetic Retinopathy	98,592	49,929	48,663
Population, aged 50 and older	1,406,212	755,224	650,988
Age-related Macular Degeneration	29,352	17,196	12,156

Based on 2004 estimates from the *1999 Survey for Income and Program Participation (SIPP)* US Census Bureau, there were 29,602 individuals recorded as legally blind in Arizona and 137,131 individuals with impaired vision<sup>b</sup>.

#### Reference

- a. Vision problems in the U.S. , 2002. *National Eye Institute*. Available at <http://www.nei.nih.gov/eyedata/pdf/VPUS.pdf>
- b.

For more information on blindness and vision impairment please visit:  
Arizona Foundation for the Eye at <http://www.raceforsight.com/afe2.html>

## 9. End Stage Renal Disease:

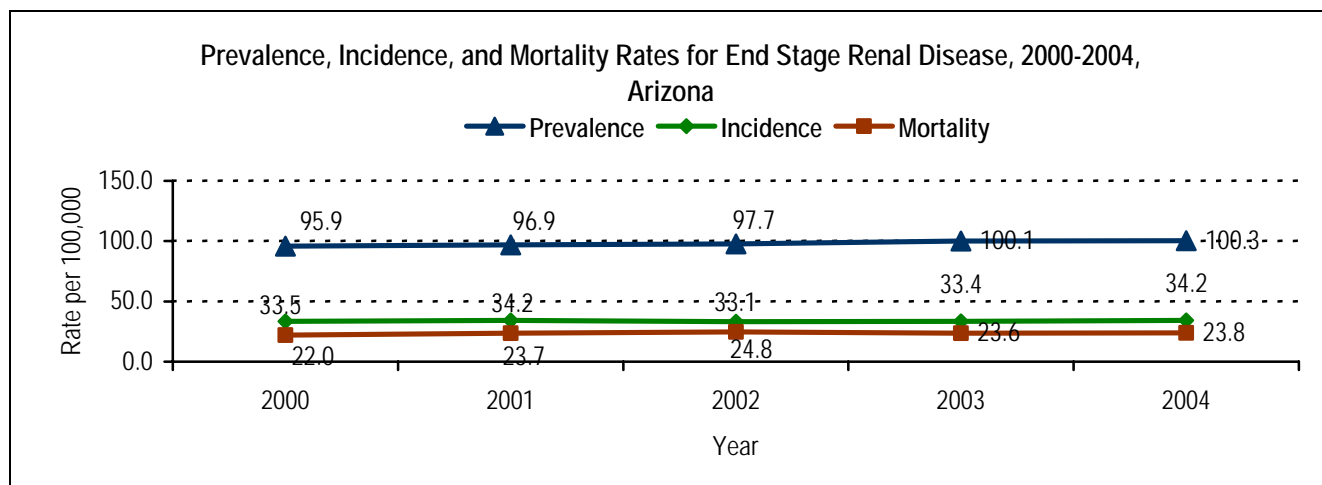
Kidneys perform many vital functions such as filtering waste and excess fluids from the blood to help maintain optimal health. End Stage Renal Disease (ESRD) may lead to complete kidney failure, which requires dialysis or a kidney transplant. The major causes of kidney disease are diabetes and hypertension<sup>a</sup>.

#### Incidence and Prevalence

The following data is based on the End Stage Renal Disease (ESRD) Network #15 Data System. The number of newly diagnosed cases (incidence) of ESRD in Arizona for 2004 was 1,993 and the number of existing cases (prevalence) of ESRD was 5,582. Since 2000, the rates of chronic ESRD have remained the same.

### Mortality

In 2004, there were 1,389 deaths due to ESRD in Arizona.



Source: End Stage Renal Disease Network #15 Data System.

### Reference

- a. How Your Kidneys Work, 2005. *National Kidney Foundation*. Available at <http://www.kidney.org/kidneydisease/howkidneyswrk.cfm>

For more information on End Stage Renal Disease in Arizona please visit , <http://www.esrdnet15.org>

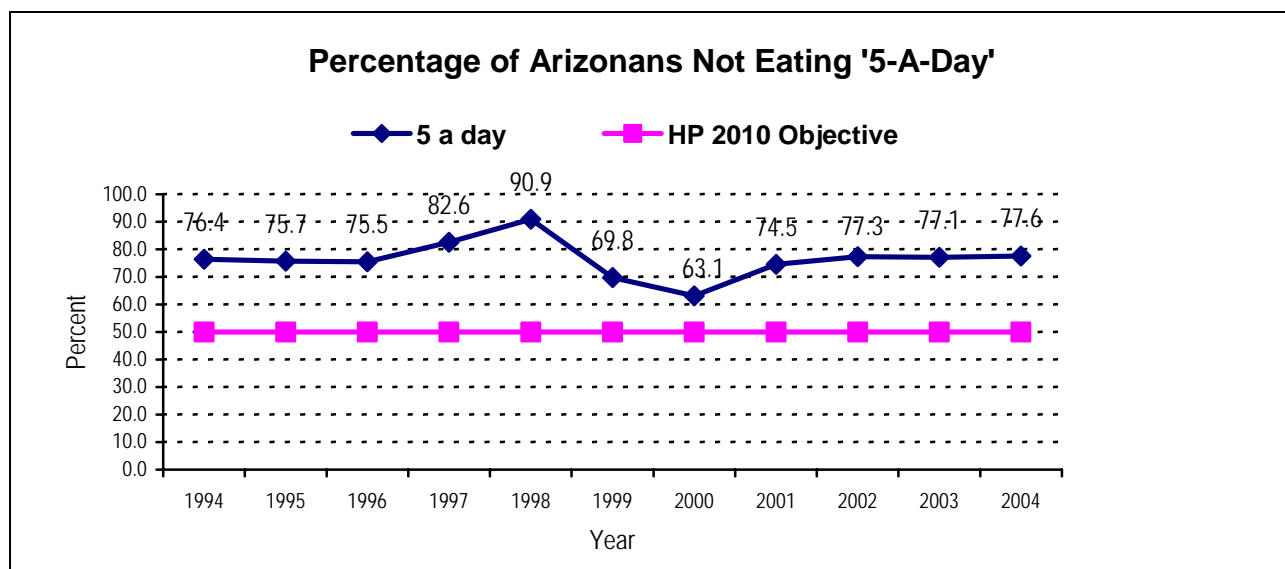


## Section III: RISK FACTORS FOR CHRONIC DISEASE AND CONDITIONS

Prevention of the common risk factors of unhealthy eating habits, physical inactivity, obesity, and tobacco use could prevent much of the morbidity from chronic disease. The following section provides information on the common risk factors for the chronic diseases highlighted in the previous section.

### 10. Nutrition: Proportion of Arizonans Consuming Inadequate Servings of Fruits and Vegetables Daily.

This indicator is defined as self-reported eating fewer than five servings of fruits and vegetables per day by adults, age 18 and older, who participated in the Arizona BRFSS.



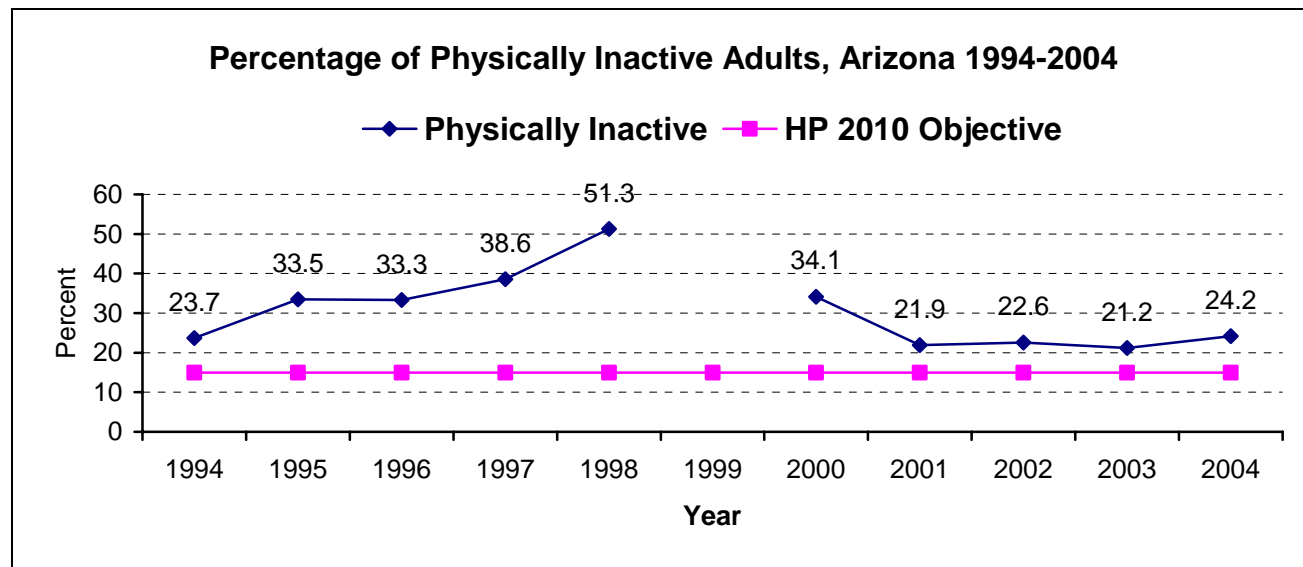
Source: Arizona BRFSS, 1994-2004.

### 11. Physical Activity:

#### Proportion Of Adults Who Are Considered Physically Inactive

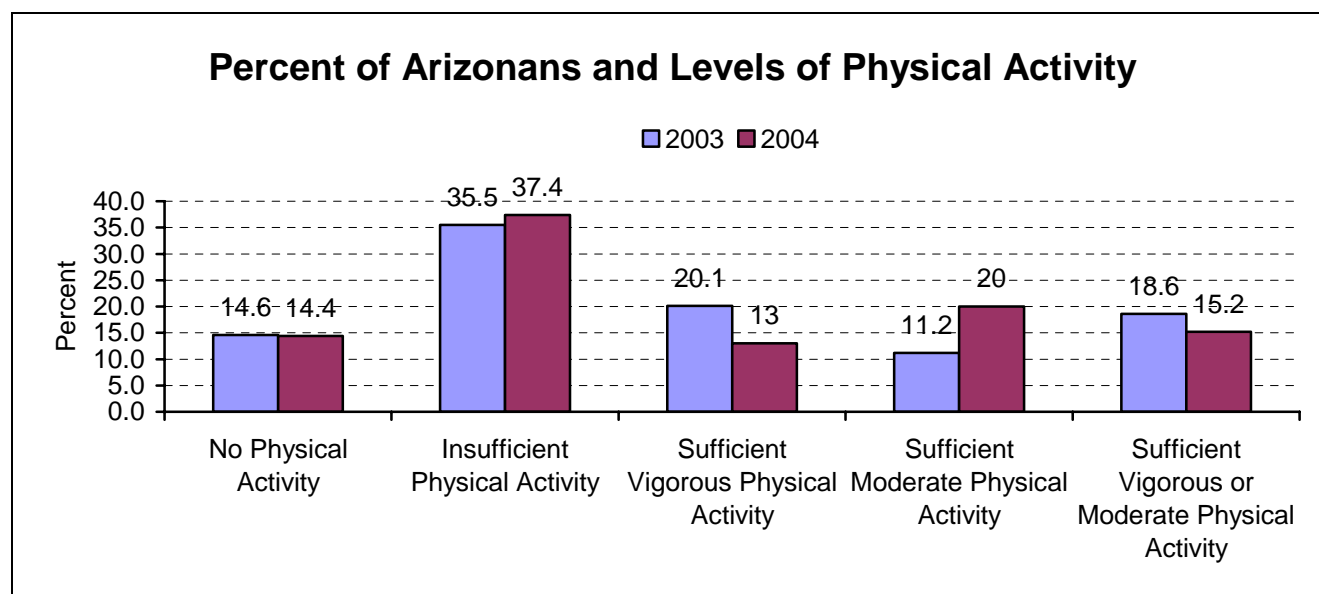
Health problems related to physical inactivity have significant economic consequences for the United States healthcare system. In the long term, physical inactivity threatens to reverse the decades-long progress that has been made in reducing the morbidity and mortality related with many chronic conditions. Regular physical activity greatly reduces the risk of dying of heart disease, the nation's leading cause of death, and decreases the risk for colon cancer, diabetes, and high blood pressure. It also helps to control weight; contributes to healthy bones, muscles, and joints; helps to relieve the pain of arthritis; reduces symptoms of anxiety and depression; and can decrease the need for hospitalizations, physician visits, and medications<sup>a</sup>.

The following data are from the Arizona BRFSS. This indicator is defined as no leisure time (outside of work) physical activity within the past 30 days by adults, age 18 and older. The graph below illustrates the proportion of adult Arizonans, who are physically inactive. Based on a 10-year trend line, approximately 30 percent of the Arizona adult population is physically inactive in their leisure time.



Source: Arizona BRFSS, 1994-2004.

Furthermore, analysis of the 2004 Arizona BRFSS data indicated that 37.4 percent of all respondents reported insufficient activity for both moderate and vigorous physical activity categories. Only 15.2 percent of respondents met the recommendations for both moderate and vigorous physical activity.



Source: Arizona BRFSS, 2003 & 2004.

## References

- a. Physical activity fundamental to preventing disease, June 2002. *U.S. Department of Health and Human Services*. Available at <http://aspe.hhs.gov/health/reports/physicalactivity/index.shtml>

### Proportion of Children Who Are Physically Active

The Arizona Youth Risk Behavior Surveillance System measured levels of physical activity among youth in Grades 9 through 12.

### Self-reported Physical Activity Among Youth During the Past Seven Days.

Year 2003	Percent
No vigorous or moderate physical activity	7.7%
Vigorous activity for 20 minutes or more/ 3 or more days	66.9%
Moderate activity 30 minutes or more/ 5 or more days	29.2%
Participated in recommended physical activity in past week	2.2%
Source: Arizona YRBSS, 2003.	

## 12. Overweight/Obesity: Pre-School Children Who Are Overweight

Data for preschool children are available through the State, and the Inter Tribal Council of Arizona (ITCA) and the Navajo Nation's Women, Infants, and Children's (WIC) Programs. The State and ITCA WIC programs define overweight as children two through four years of age with a weight for height  $\geq 95^{\text{th}}$  percentile. The Navajo Nation WIC program defines overweight as children one through four years of age with weight for height  $> 90^{\text{th}}$  percentile. These data only include low-income children participating in the WIC programs conducted by the State of Arizona, the ITCA, or the Navajo Nation.

### WIC participants and program characteristics report.

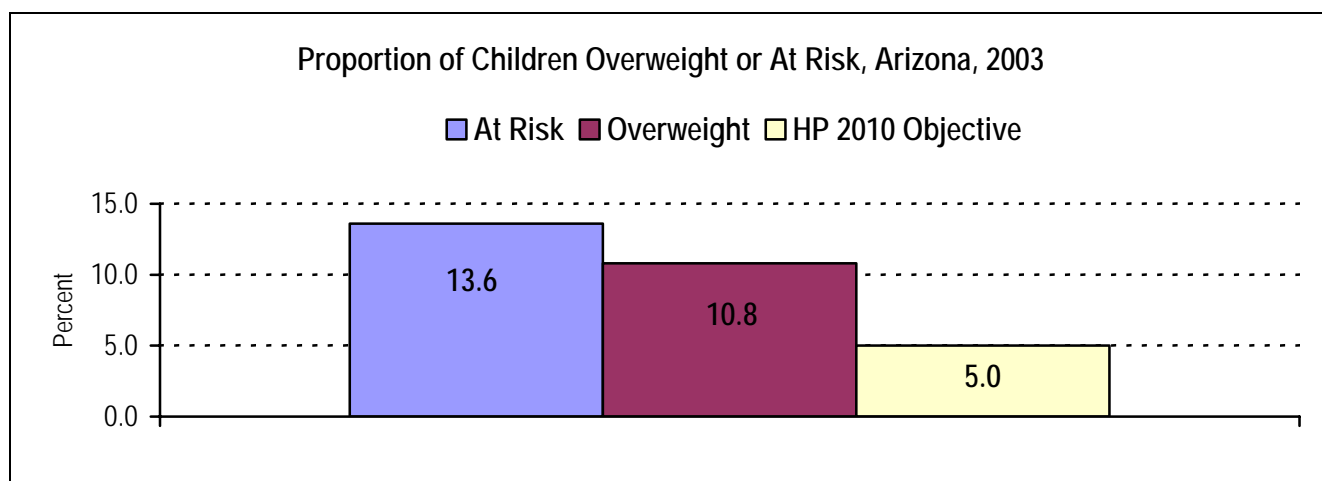
Source	Year	Number of Clients	Percent Overweight
State of Arizona WIC Program (Infants 0 to < 24 months)	2004	100,904	15.6%
State of Arizona WIC Program (Children 2-5 years)	2004	78,247	12.9 %
Inter-Tribal Council of Arizona	2002	4,912	20.8%
Navajo WIC Program	1998	11,655	21.1% ( $>90^{\text{th}}$ percentile)

**NOTES:**

- Arizona WIC - 2004 Pediatric Nutrition Surveillance System.
- Navajo WIC Program - Data from the Navajo Nation may include some children living in New Mexico.

**Proportion of High School Age Children Who Are Overweight or At Risk to Become Overweight**

This information is compiled from students responding to the 2003 Arizona YRBSS. The survey included students in grades 9 through 12. Students reported their height and weight. Height and weight was used to calculate Body Mass Index (BMI) for Children and Teens (also referred to as BMI-for-age). Overweight is defined as BMI  $\geq$  95<sup>th</sup> percentile and At Risk of Overweight is defined as BMI  $\geq$  85<sup>th</sup> percentile and < 95<sup>th</sup> percentile.

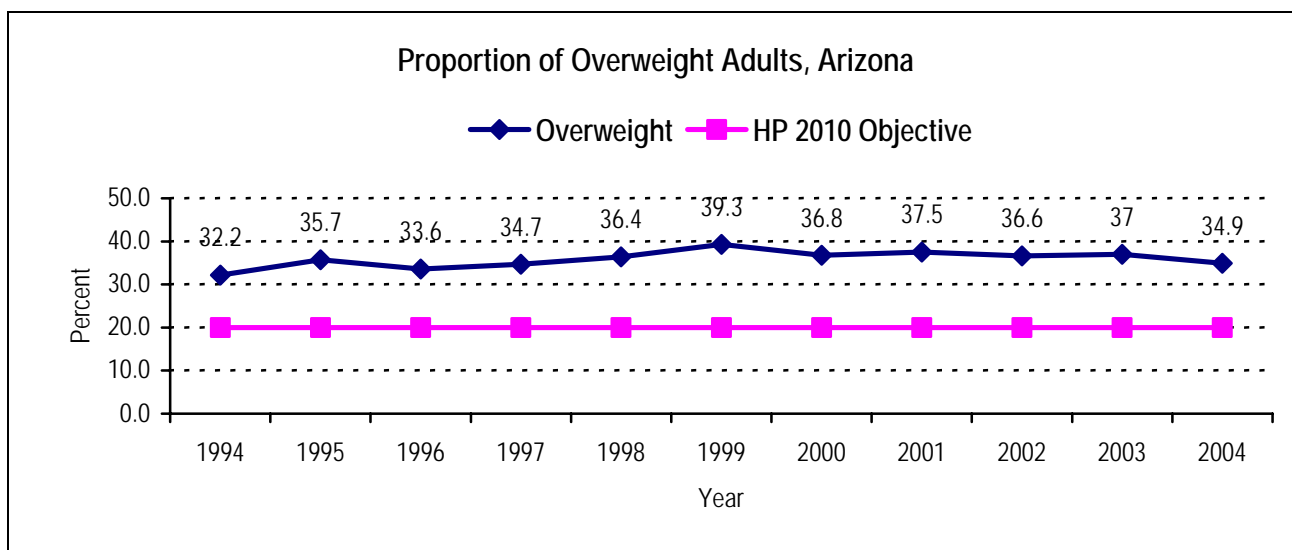


Source: Arizona YRBSS, 2003.

Excessive weight in adults is divided into two exclusive categories: overweight and obese.

**Proportion of Adults Who Are Overweight**

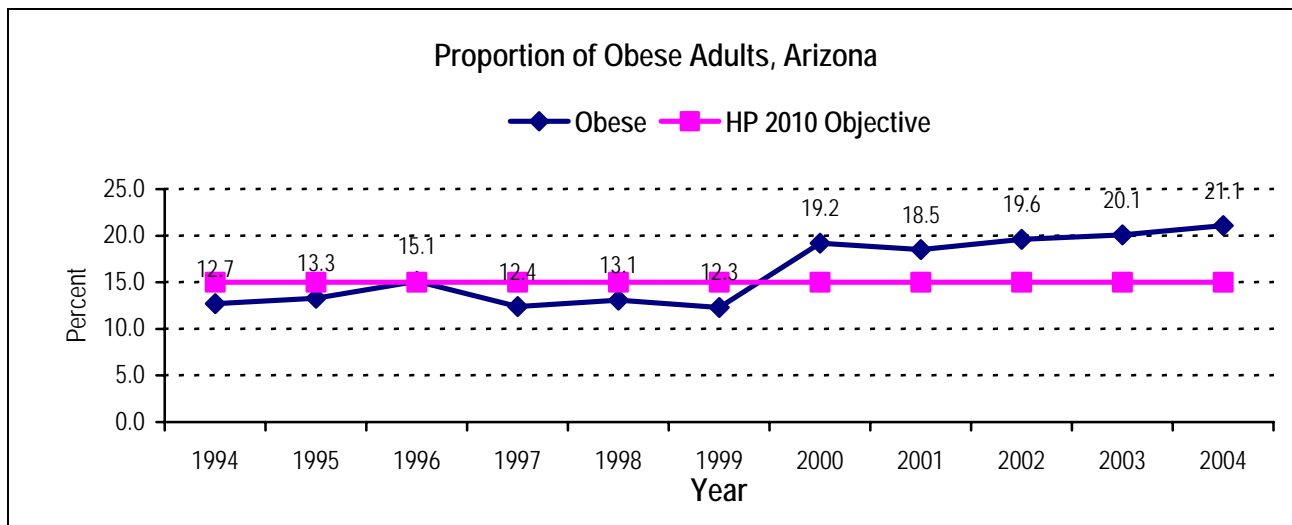
Respondents to the Arizona BRFSS with a BMI between 25.0 and 29.9 are considered overweight adults. BMI is defined as weight in kilograms divided by height in meters squared ( $w/h^2$ ). The denominator includes all survey respondents, except those with missing, do not know and refused answers.



Source: Arizona BRFSS 1994-2004.

### Proportion of Adults Who Are Obese

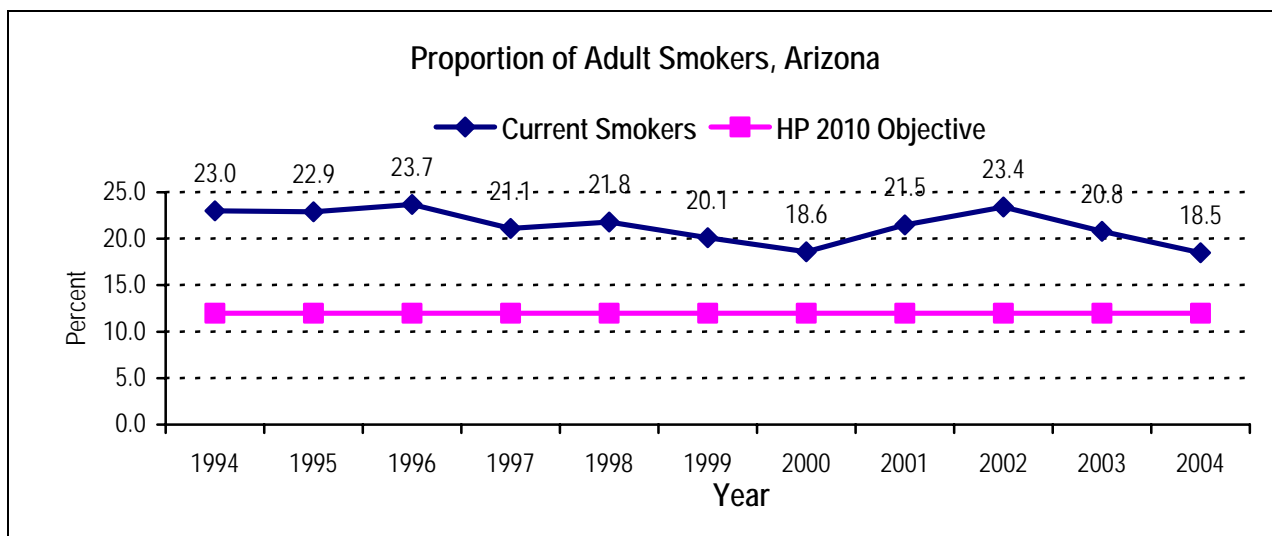
Respondents to the Arizona BRFSS with a BMI of 30.0 or more are considered obese adults. The denominator includes all survey respondents, except those with missing, do not know and refused answers.



Source: Arizona BRFSS, 1994-2004

### 13. Tobacco: Proportions of Arizonans Who Are Current Smokers

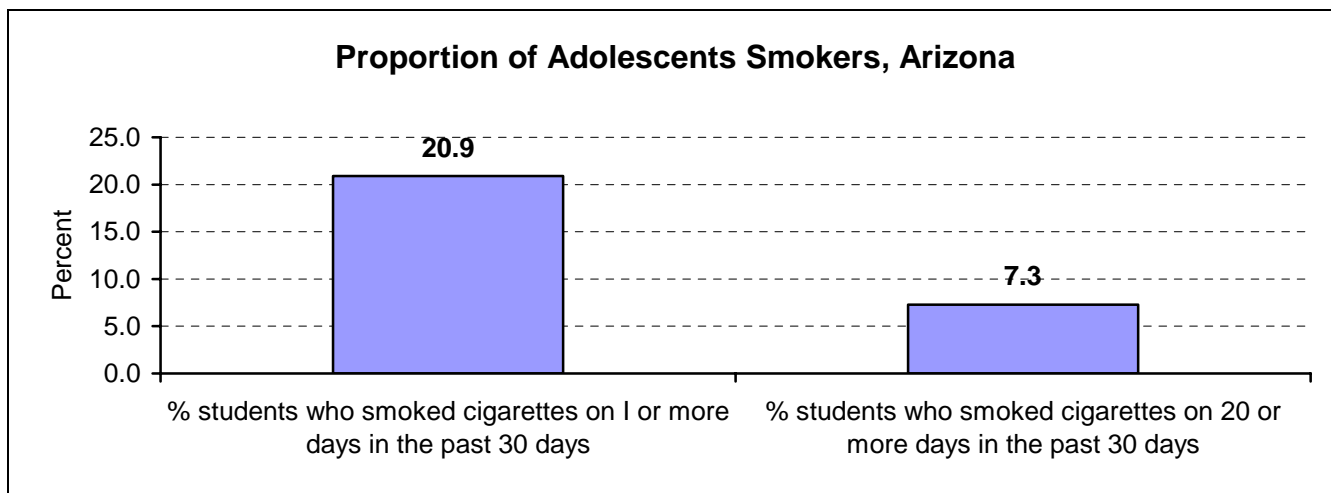
This indicator is defined as self-reported current smokers by adults, age 18 and older, who participated in the Arizona BRFSS.



Source: Arizona BRFSS, 1994-2004.

### Proportion of Children Who Are Smokers

This information is compiled from students responding to the 2003 Arizona YRBSS. Approximately 60 percent of the students replied that they 'ever tried cigarette smoking' (even one or two puffs). The following graph presents information about students' smoking patterns within the past 30 days. Twenty percent of students reported smoking cigarettes on one or more days and seven percent of students reported smoking on 20 or more days both within the past 30 days. The Healthy People 2010 goal is to decrease adolescent smoking to 16 percent.

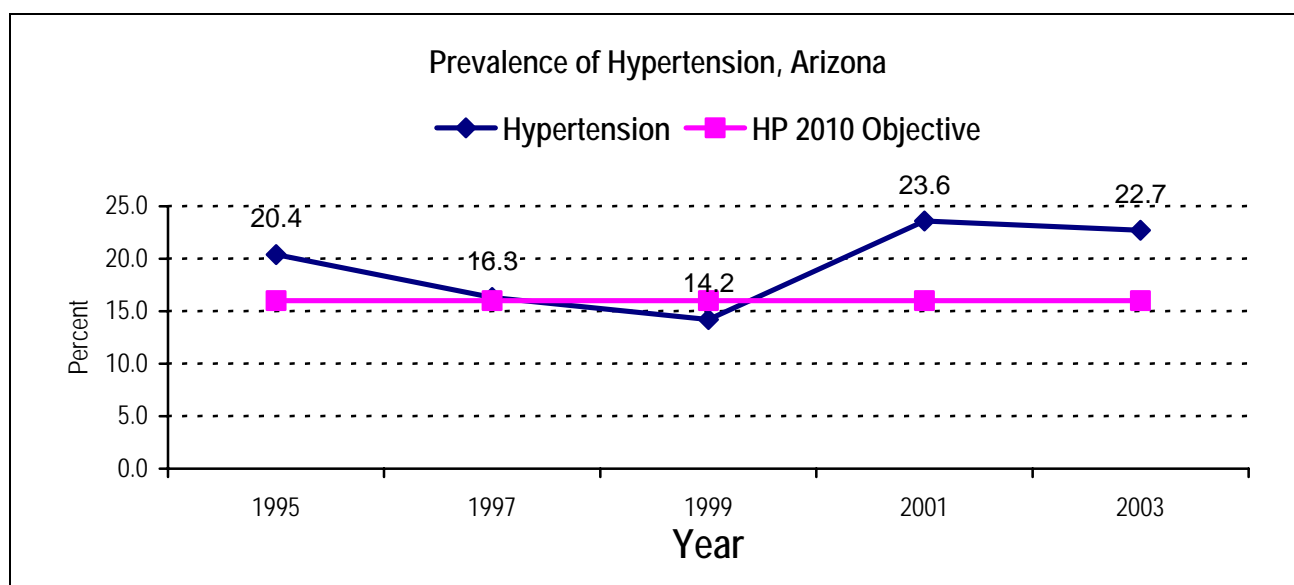


Source: Arizona YRBSS, 2003.

#### 14. Hypertension:

Hypertension (high blood pressure) is when blood pressure frequently exceeds 140/90. High blood pressure is a risk factor for heart disease, stroke, kidney failure, and blindness. About one in every five adults in the United States has high blood pressure. High blood pressure occurs more often in men than in women and almost twice as often in African-Americans compared to Caucasians. Most of the time, no cause is identified and this is called essential hypertension. Other times, there may be an identifiable reason why blood pressure is high. Excess sodium (salt) in one's diet may be an identifiable cause of increased blood pressure. Lifestyle modifications such as following a low sodium diet, exercising, quitting smoking, losing weight, and avoiding excessive alcohol intake, are often recommended for maintaining normal blood pressure (National Institute of Health, 2003). According to the 1995 Nutrition Survey conducted in Maricopa County, 30 percent of the population consumes high levels of sodium per day (> 3000 mg/day).

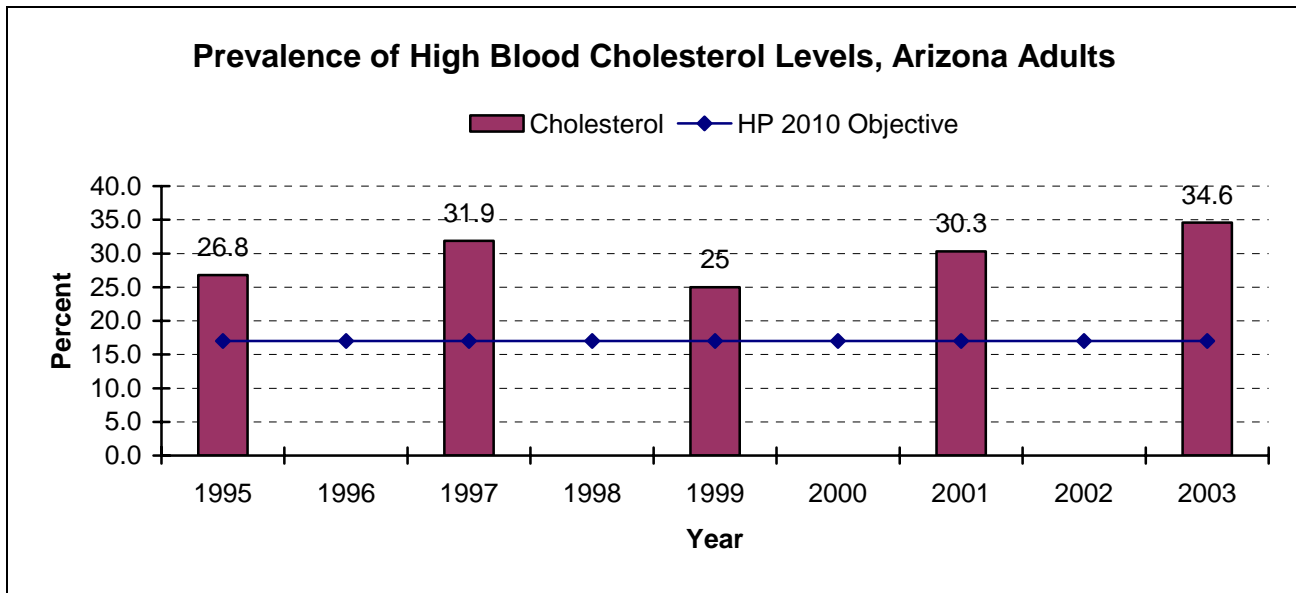
The following table illustrates the percent of Arizonans with hypertension. In 2003, 22.7 percent Arizona adults reported that they were told they have hypertension.



Source: Arizona BRFSS, 1995, 1997, 1999, 2001, and 2003.

#### 15. Cholesterol:

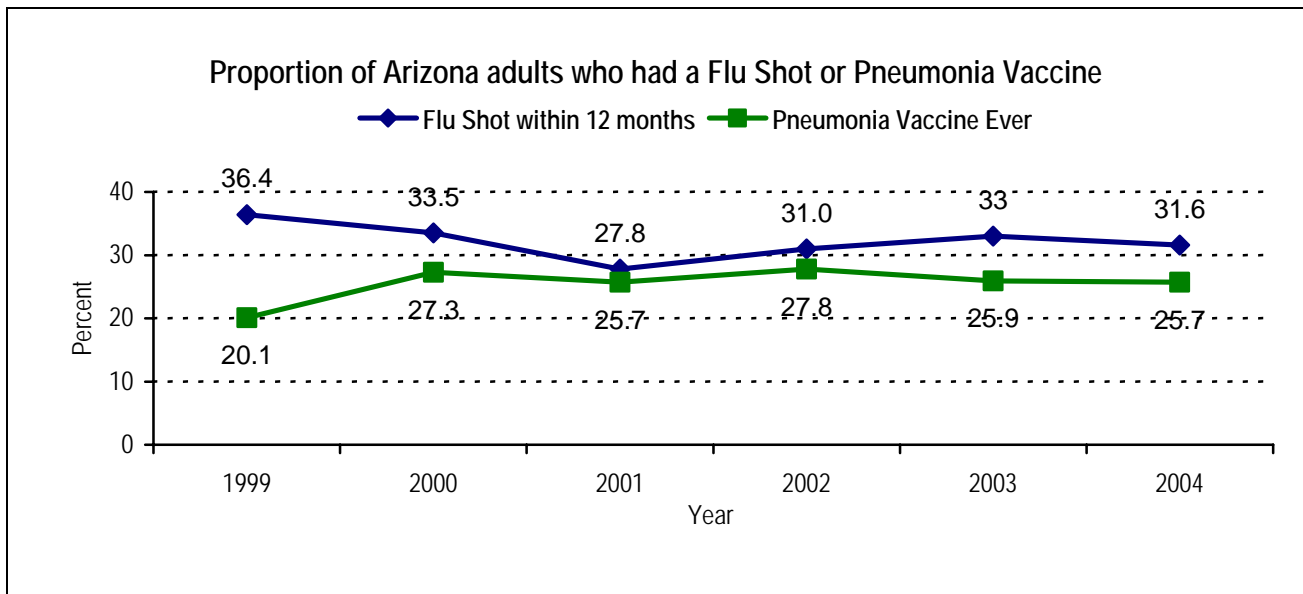
Elevated cholesterol levels are linked to heart disease and stroke. The Arizona BRFSS was used to determine the proportion of Arizona adults with high blood cholesterol. In 2003, 34.6 percent of all Arizona adults reported high cholesterol levels.



Source: Arizona BRFSS, 1995, 1997, 1999, 2001, and 2003.

## 16. Immunizations:

The Arizona BRFSS was used to determine the proportion of Arizona adults who received a flu shot or pneumonia vaccination. In 2004, 31.6 percent of Arizona's adults received a flu shot within the past 12 months and 25.7 percent had received a pneumonia vaccine. The Healthy People 2010 objective for adults is 60 percent.



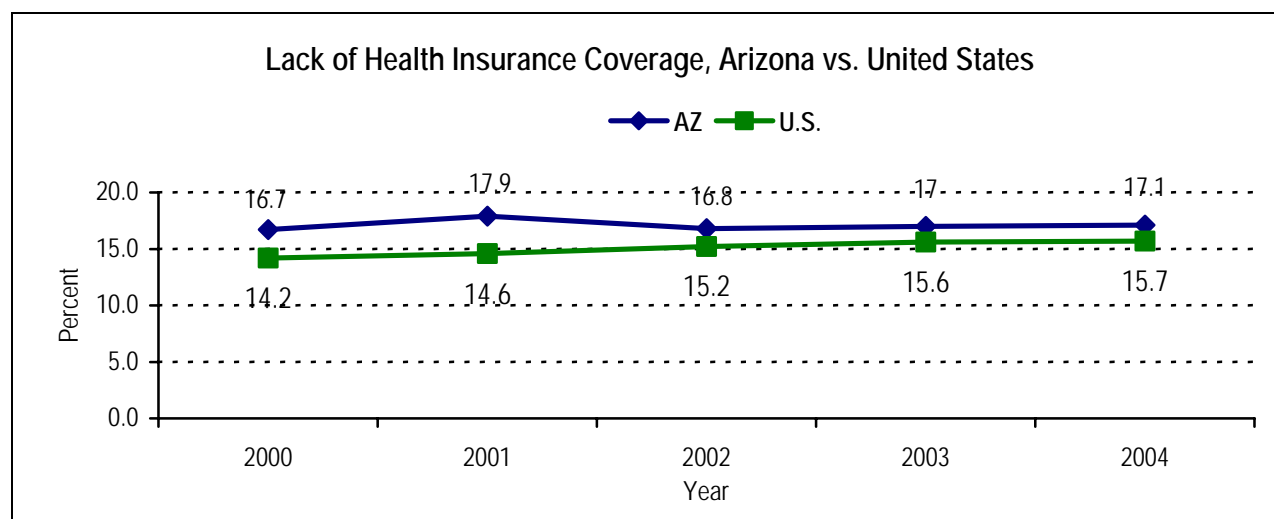
Source: Arizona BRFSS, 1999-2004.

## 17. Health Insurance:

The ability to access healthcare makes a substantial difference in the kind and amount of healthcare received. Persons, who run the highest risk of being uninsured are low-income individuals or those who earn less than 200 percent of the federal poverty level. Arizona has



one of the highest rates of uninsured<sup>a</sup>. Typically, there are more uninsured adults than children because Arizona Health Care Cost Containment System (Arizona's Medicaid program) and Kids Care (Arizona's Children's Health Insurance Program) focus on children. Access to healthcare is of great importance because uninsured adults and children are less likely to seek preventive services. Delay in seeking and receiving treatment can lead to more serious and costly health problems. Since the year 2000, the rate of uninsured Arizonans has remained steady.



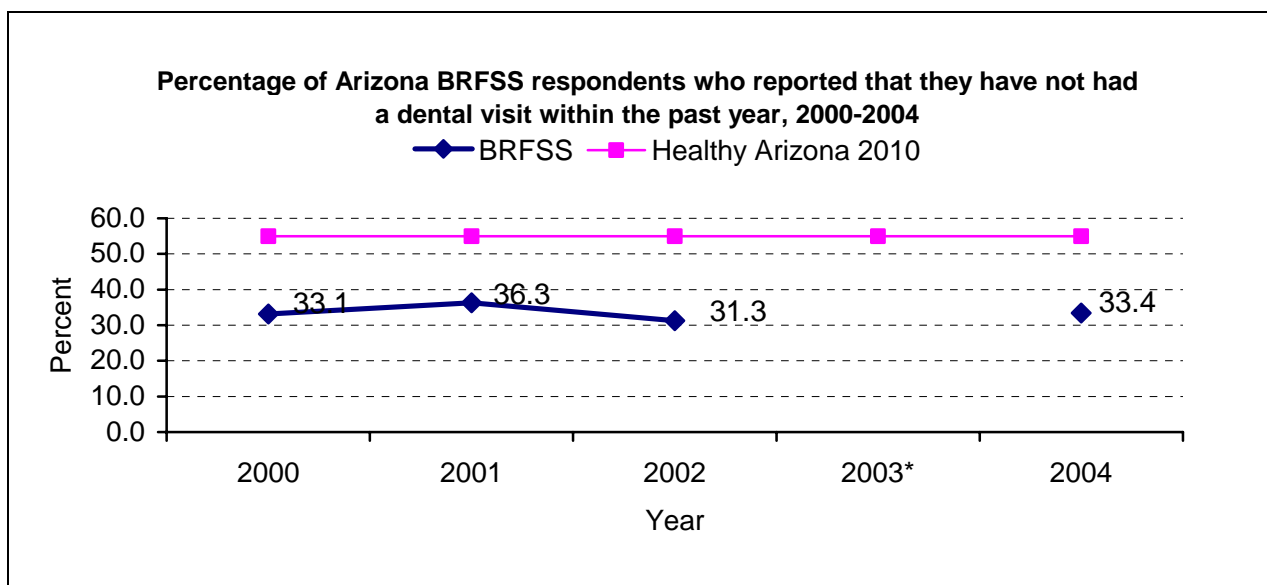
Source: United States Census Bureau ([www.census.gov](http://www.census.gov)).

## References

- a. The Uninsured: A Primer, 2004. *Kaiser Family Foundation*. Available at <http://www.kff.org/uninsured/loader.cfm?url=/commonspot/security/getfile.cfm&PageID=50811>

## 18.Oral Health: Proportion of Arizonans who have not had a dental visit in the past year

Oral health is more than healthy teeth. Oral diseases and disorders in and of themselves affect health and well-being throughout life. Oral diseases are progressive and cumulative and become more complex over time. They affect the economic productivity and compromise our ability to work at home, at school, or on the job<sup>a</sup>. Approximately 30,000 U.S. persons are diagnosed with oral and pharyngeal cancers annually and nearly 8,000 die from them<sup>b</sup>. According to the 2004 BRFSS, 33.4 percent of respondents had not had a dental visit within the past year. This percentage increased from the 2002 BRFSS (31.3%) and the target to achieve the Healthy Arizona 2010 Objective is 55% for adults.



Source: Arizona BRFSS 2000-2004

\*No data collected in 2003

#### References:

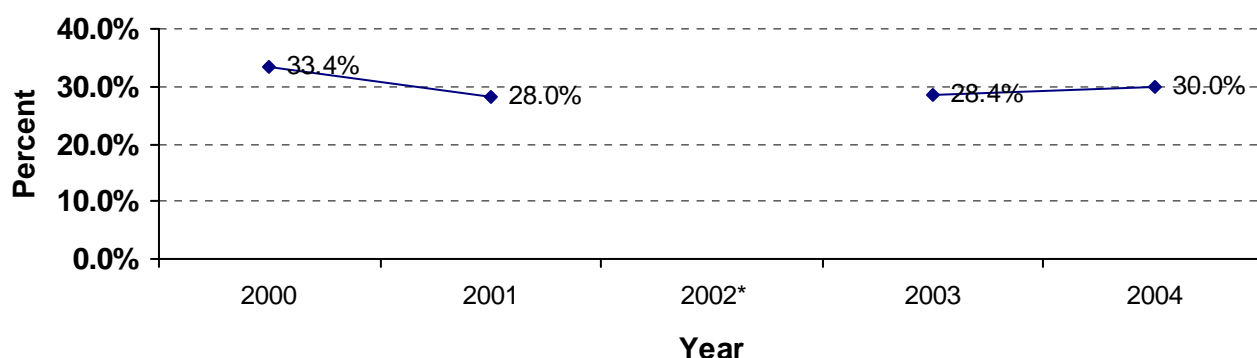
- a. U. S. Department of Health and Human Services. *National Call to Action to Promote Oral Health*. Rockville, MD: U.S. Department of Health and Human Services, Public Health Service, National Institutes of Health, National Institute of Dental and Craniofacial Research. NIH Publication No. 035303, Spring 2003
- b. Horowitz AM, Siriphant P, Canto MT, Child WL: Maryland Dental Hygienists' Views of Oral Cancer Prevention and Early Detection. *The Journal of Dental Hygiene* 2002; 76: 186-191.

### 19. Mental Health: Proportion of Arizonans who had fourteen or more mentally unhealthy days during the past 30 days

Mental disorders are common in the United States and internationally. An estimated 22.1 percent of Americans ages 18 and older—about one in five adults—suffer from a diagnosable mental disorder in a given year<sup>a</sup>. Healthy People 2010 lists mental health as one of the ten leading health indicators. Numerous studies have been conducted which explain the damaging effect of psychological factors on high blood pressure<sup>b-d</sup>, and adverse lipid profiles<sup>e-f</sup>.

The following table indicates results from self – reported BRFSS from 2000 – 2004. During the year 2000, 33.4 percent of the respondents had 14 or more days when their mental health was not good in the past 30 days. The percentage remained steady for the years 2001, 2003. No data was collected in 2002 for mental health in the BRFSS survey and it increased to 30 percent for 2004.

**Proportion of Arizonans who had fourteen or more mentally unhealthy days during the past 30 days, 2000-2004**



Source: Arizona BRFSS 2000-2004

\*No data collected in 2002

**References:**

- a. National Institute of Mental Health, 2001. *The Numbers Count: Mental Disorders in America*, <http://www.nimh.nih.gov/publicat/numbers.cfm>.
- b. Markovitz J, Matthews K, Kannel W, Cobb J, D'Agostino R. Psychosocial predictors of hypertension in the Framingham study: is there tension? *JAMA* 1993;270:2439-2443.
- c. Porter L, Stone A, Schwartz J. Anger expression and ambulatory blood pressure: a comparison of state and trait measures. *Psychosom Med* 1999;61:454-463.
- d. Goldberg E, Comstock G, Graves C. Psychosocial factors and blood pressure. *Psychol Med* 1980;10:243-255.
- e. Engerbreston TO, Stoney CM. Anger expression and lipid concentrations. *Int J Behav Med* 1995;2:281-298.
- f. Chikani V, Reding D, Gunderson P, McCarty C (2004). Wisconsin Rural Women's Health Study. Psychological Factors and Blood Cholesterol Level: Difference between Normal and Overweight Rural Women. *Clinical Medicine and Research* 2(1):47-53.

## Data Sources

Data for surveillance of chronic disease indicators are derived from multiple sources.

- ❑ Behavioral Risk Factor Surveillance System (BRFSS) is a telephone survey conducted by the ADHS, who uses BRFSS data to track health problems and evaluate public health programs. Data are collected by using standard procedures through monthly telephone interviews with adults (persons, aged 18 and older).
- ❑ Death certificates are completed for all deaths that occur in the state. The data used only reflects that of Arizona residents. Death data are used to monitor the underlying cause of death.
- ❑ Emergency department data contains emergency room visits information reported every six months to the Department of Health Services by all emergency room throughout the state, with the exception of Veterans Administration Hospital, Military Hospitals, and Indian Health Service Hospitals (which maintain their own data). Emergency Department contains data on diagnosis and procedure codes by gender, age, and payer type. It is also possible to generate statistics on specific physicians, areas in the state by zip code, county or other areas, and costs for each visit.
- ❑ Hospital Discharge Data are records associated with a patient's stay. The data contains diagnosis and treatment information. The state-based hospital discharge data does not include federal facilities, such as the Veterans Affairs or Indian Health Service hospitals.
- ❑ The United States Renal Data System (USRDS) is a national data system that collects, analyzes, and distributes information on ESRD.
- ❑ The Youth Risk Behavior Surveillance System (YRBSS) monitors risk behaviors among youth. The risk behaviors include tobacco use, unhealthy dietary behavior, inadequate physical activity, alcohol and other drug use, risky sexual behaviors, and behaviors that contribute to unintentional injuries and violence. The YRBSS includes local representative samples of students in Grades 9-12. The YRBSS was conducted for the first time in 2003 for Arizona.

## CONCLUSION

In conclusion, the health indicators addressed in this report were chosen if they impose a considerable public health burden and if the data were available for its inclusion. The main purpose of this report is to serve the needs of several chronic disease programs through the ongoing systematic collection, analysis, and interpretation of data.

For further questions, please contact the Epidemiology Unit, ADHS Public Health Prevention Services at 602-542-1223.